IN THE CLAIMS

Please substitute the following pending claims 1-4, 6-24 and 34-37 as replacement claims for the previously-pending claims. In this Amendment B, claims 1-4, 6, 8 and 10-24 have been amended, claims 5 and 25-33 have been canceled, and new claims 34-37 have been added.

1. (Currently amended) A method to create and characterize an array of polymeric materials comprising:

depositing a ~~wettable~~ first material selected from the group consisting of a group 6, 7, 8, 9, 10, and 11 metals from the Periodic Table of the Elements and combinations thereof onto a substrate in at least 10 regions,

thereafter ~~contacting~~ placing the substrate in a solution comprising a second material,~~a non-wettable material~~ thereby ~~rendering~~modifying ~~the~~ a surface tension of the substrate ~~non-wettable~~ but not ~~the~~ a surface tension of the first~~wettable~~ material in said at least 10 regions,

optionally, partially or completely removing the ~~wettable~~ first material,

depositing at least 10 polymeric materials onto said at least 10 regions, and

characterizing the at least 10 polymeric materials.

2. (Currently amended) The method according to claim 1, wherein the ~~wettable material is an unsilanizable material which is deposited onto a silanizable substrate and the non-wettable~~ second material is an organosilane agent which silanizes the substrate but not the ~~unsilanizable~~first material.

3. (Currently amended) The method of claims 1 or 2 wherein said deposition step additionally comprises overlaying a template comprising holes for said at least 10 regions onto said substrate, the template comprising holes at regular known intervals and depositing said ~~wettable~~ first material onto said substrate through said holes.

4. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 3~~ wherein the first~~wettable~~ material is deposited onto the substrate via thermal deposition or vapor deposition.

5. (Canceled)

6. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 5~~ wherein the second~~non-wettable~~ material is an organosilane agent which is represented by the formula: R_nSiX_{4-n} where each X is independently a halogen, hydroxy or alkoxy, each R is independently selected from the group consisting of alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heteroalkyl, heterocycloalkyl, substituted heterocycloalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, alkoxy, aryloxy, silyl, boryl, phosphino, amino, thio, seleno, and combinations thereof; and n is 1, 2 or 3.

7. (Original) The method of claim 6 wherein X is chlorine, fluorine or bromine.

8. (Currently amended) The method of claims 6 ~~or 7~~ wherein n is 1.

9. (Original) The method of claim 6 wherein n is 1, each X is chlorine, and R is an alkyl or substituted alkyl.

10. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 9~~ wherein the second~~non-wettable~~ material is fluorophilic, hydrophobic or hydrophilic.

11. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 10~~ wherein the characterization is by infrared spectroscopy or X-ray fluorescence.

12. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 11~~ wherein the first~~wettable~~ material is selected from the group consisting of Au, Cr, Ag, Cu, Ni, Pd, Pt, Mo, W, Co and combinations thereof.

13. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 12~~ wherein the at least 10 polymeric materials are polymers of one or more olefin monomers.

14. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 13~~ wherein the at least 10 polymer materials are different from each other.

15. (Currently amended) The method of ~~any one of~~ claims 1 ~~to 14~~ wherein each region has a hole ~~there~~through the region and the substrate and the polymeric materials cover the holes.

16. (Currently amended) A method for forming an array of polymeric materials to be characterized ~~on~~to a substrate comprising:

(a) preparing a substrate, the preparation comprising

a. overlaying a template comprising ten or more holes onto the substrate,

b. depositing a first material onto the substrate through the ten or more holes of the template, the first material selected from the group consisting of groups 6, 7, 8, 9, 10 and 11 metals of the Periodic Table of the Elements, ink, photoresist material, adhesives, adhesive tapes, pressure sensitive adhesive tapes, other adhesively adhered material and combinations thereof,

c. removing the template,

d. thereafter contacting the substrate with an organosilane agent, whereby the resulting surface tension of the substrate and the surface tension of the first material are different from each other,

(b) selecting ten or more different polymers to be characterized,

(~~b~~c) dissolving or suspending each polymer to be characterized in a separate liquid, and

(~~c~~d) depositing a uniform amount of each of the ten or more polymer containing liquids onto ~~a~~the substrate in individual ~~wettable~~ regions created by the deposition of the first material.

17. (Currently amended) The method of claim 16 wherein the regions created by the deposition of the first material are hydrophilic ~~and/or hydrophobic~~.

18. (Currently amended) The method of claim 16~~7~~ wherein the preparation step further comprises removing the first material after contacting the substrate with the organosilane agent ~~regions have unsilanizable material deposited thereon prior to the dispensing step~~.

19. (Currently amended) The method of claim 16 wherein the first material is gold~~substrate has been prepared by overlaying a template containing holes onto a substrate, depositing wettable material onto the substrate, thereafter contacting the substrate with a non-wettable material, and optionally removing part or all of the wettable material~~.

20. (Currently amended) The method of claim 19 wherein the ~~substrate is silanizable, the wettable material is unsilanizable material and the non-wettable material is an~~ organosilane agent is represented by the formula: R_nSiX_{4-n} where each X is independently a halogen, hydroxy or alkoxy, each R is independently selected from the group consisting of alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heteroalkyl, heterocycloalkyl, substituted heterocycloalkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, alkoxy, aryloxy, silyl, boryl, phosphino, amino, thio, seleno, and combinations thereof; and n is 1, 2 or 3.

21. (Currently amended) The method of ~~any one of~~ claims 16 ~~to 20~~ wherein the same polymer containing liquid is deposited multiple times at the same region on the substrate.

22. (Currently amended) The method of ~~any one of~~ claims 16 ~~to 21~~ wherein the volume of liquid per unit area of the region created by the deposition of the first material is in the range of from about 0.1 $\mu L/mm^2$ to about 5 $\mu L/mm^2$.

23. (Currently amended) The method of ~~any one of~~ claims 16 ~~to 22~~ wherein the polymer forms a film having a thickness of at least about 0.1 to about 1000 μm at the center of the film.

24. (Currently amended) The method of ~~any one of~~ claims 16 ~~to 23~~ wherein the liquid has been removed from the polymer containing liquid after deposition onto the substrate.

Claims 25-33 (Canceled)

34. (New) A method to create and characterize an array of polymeric materials comprising:

depositing gold onto a substrate in at least ten discrete regions,

thereafter contacting the substrate with a second material, thereby modifying a surface tension of the substrate but not a surface tension of the gold in said at least ten discrete regions,

depositing at least ten non-biological polymeric materials onto the gold in the at least ten discrete regions, and

characterizing the at least ten non-biological polymeric materials using spectroscopy.

35. (New) The method of claim 34, wherein the second material is an organosilane.

36. (New) The method of claim 35, wherein the organosilane is selected from the group consisting of methyltrichlorosilane, phenyltrichlorosilane, octyltrichlorosilane, octadecyltrichlorosilane, and perfluorooctyltrichlorosilane.

37. (New) The method of claim 34, wherein the contact angle between the at least ten non-biological polymeric materials and the gold is greater than 90°.

[NO FURTHER AMENDMENTS THIS PAGE]